

**Before the**  
**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**  
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**Case No. 164 of 2023**

**Case of Maharashtra State Electricity Distribution Co. Ltd. seeking approval for Procurement of 7000 MW Solar Power on Long Term Basis for 25 years under Mukhyamantri Saur Krushi Vahini Yojana 2.0 and deviations in standard bidding document.**

M/s Maharashtra State Electricity Distribution Company Ltd. (MSEDCL)...                      Petitioner

**Coram**

**Sanjay Kumar, Chairperson**  
**Anand M. Limaye, Member**  
**Surendra J. Biyani, Member**

**Appearance:**

For the Petitioner                      :    Smt. Deepa Chavan, (Adv)

**ORDER**

**Date: 11 August 2023**

1. Maharashtra State Electricity Distribution Company Ltd. (MSEDCL) has filed the present Petition on 19 July 2023 seeking approval for initiation of competitive bidding process through MSEB Solar Agro Power Limited (MSAPL) for procurement of 7,000 MW solar power. Further, it sought approval to deviation in standard bidding guidelines for the proposed long-term procurement of solar power.
2. **MSEDCL's main prayers are as follows:**

“

- a) *To admit the Petition as per the provisions of the Regulation 19 of Maharashtra Electricity Regulatory Commission (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2019.*
- b) *To accord approval for initiation of competitive bidding process through MSAPL for procurement of 7,000 MW solar power.*
- c) *To accord approval for deviation in standard bidding guidelines and allow to incorporate this deviation in the bid document (RfS), and/or the PPA.*
- d) *To consider the submission made by the Petitioner and consider the same positively while deciding the Petition as well as for further actions;*
- e) *To pass any other order/relief as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice;*
- f) *Condone any error/omission and to give opportunity to rectify the same;*
- g) *To permit the Petitioner to make further submissions, additions and alterations to this Petition as may be necessary from time to time.”*

### 3. **MSEDCL in its Case has stated as follows:**

3.1. The Government of Maharashtra vide its resolution dated 8 May 2023 has notified the Mukhyamantri Saur Krushi Vahini Yojana 2.0 (MSKVY 2.0) with following multifold objectives:

- MSEDCL will be able to procure additional power towards RPO obligations;
- The overall power procurement cost for MSEDCL will reduce; and
- The agriculture feeders will be solarised with an objective of supplying better quality of electricity to the agricultural consumers during the daytime.

3.2. The agriculture sector accounts for about 32% of the total power consumption in the state of Maharashtra, which is significant.

3.3. Salient Features of MSKVY 2.0:

3.3.1 Establishment of Nodal Agency: Pursuant to MSKVY 2.0, MSAPL has been incorporated as a wholly owned subsidiary of MSEDCL Holding Company Limited to act as the nodal agency. MSAPL will be responsible for facilitating implementation of MSKVY 2.0.

3.3.2 Availability of Land: In order to ease the process of arranging land and enabling speedy implementation of a project, MSKVY 2.0 provides for identification and availability/procurement of revenue land around the identified substations by MSAPL (within 5/10 km radius of the selected substations) for the purpose of setting up the projects. These details will be made available to the solar power developer through a web portal.

In addition to this, MSAPL has compiled a list of private land parcels (within a 5 km radius of the identified substations) that are available for lease under MSKVY 2.0.

For transparent information of the land availability (Government and Private), MSAPL will establish a land aggregation portal, which will have the details of the potential land parcel like layout and dimensions of the land, distance from nearest substation, etc.

- 3.3.3 Approvals and Clearances: MSKVY 2.0 also provides for upfront grant of certain clearances/approvals to the SPV. In addition to this, a single window portal has been developed by MEDA for facilitating procurement of other approvals by the SPV.
- 3.3.4 Implementation through Special Purpose Vehicles (SPVs): The implementation of MSKVY 2.0 is proposed to be carried out through incorporation of special purpose vehicles (SPVs), as wholly owned subsidiaries of MSAPL. The SPVs, which will also house the identified approvals and the land leases of revenue land.
- 3.3.5 Revolving fund for Payment Security: MSKVY 2.0 also contemplates creation of a revolving credit fund to be maintained by MSAPL. Such credit fund will be for an amount equivalent to Rs. 100 Crores for every 1 GW or part thereof being developed, earmarked from Green Cess Fund.
- 3.3.6 Incentives: MSKVY 2.0 also seeks to encourage early commissioning of a project by the solar power developer, by providing a fiscal incentive of Rs. 0.25/kWh for units injecting energy at 11/22 kV bus bar, and INR 0.15/kWh for units injecting energy at 33 kV bus bar. Such incentive will be granted for a period of 3 (three) years from the date of commissioning of any unit forming part of the decentralised project being established by an SPV. Such incentive will be provided to the SPV if it achieves commissioning of at least 75% of the total contracted capacity prior to the scheduled commercial operation date.
- 3.3.7 System Strengthening: As part of MSKVY 2.0, it is proposed that the Government of Maharashtra will provide a 'one-time grant' of up to Rs 25 Lakhs per substation to MSEDCL for system strengthening for the identified substations of MSEDCL to accommodate projects under MSKVY 2.0.
- 3.3.8 Deemed Generation: MSKVY 2.0 also envisages insulating the solar power developer by providing the benefit of deemed generation to the solar power developer on account of: (i) generation loss due to interruption in the network of MSEDCL or any transmission entity while evacuating the power, and (ii) in case of a delay in grant of connectivity on the part of MSEDCL which results in delay in commissioning of a project established by an SPV.

- 3.3.9 Sizing assessment: The bid document to be issued by MSAPL shall specify the clusters of substations for which the bids will be invited in the tender process.
- 3.3.10 Reduction in cross subsidy: The proposed procurement of energy through cheaper solar power will reduce the burden of cross subsidy on industrial and commercial consumers.
- 3.3.11 Social Benefit: A social benefit grant of Rs 5 Lakhs/year is also proposed to be given by the Government of Maharashtra to the respective Gram Panchayats where the solar projects are installed under the MSKVY 2.0 scheme. These grants are proposed to be provided for a period of 3 (three) years from the date of commissioning of the solar power projects.
- 3.3.12 PM KUSUM Incentives: Under MSKVY 2.0, it is contemplated that, to the extent eligible, the proposed projects may also avail the ‘Central Financial Assistance (CFA)’ benefits under component C of the Guidelines for Implementation of Pradhan Mantri Kisan Urja Suraksha evem Utthan Mahabhiyan (PM KUSUM) Scheme issued by MNRE vide notification dated 22 July 2019. The responsibility of ensuring that a project established by an SPV complies with the eligibility criteria and the guidelines under the KUSUM Scheme, for availing the CFA, shall however be vested with the SPV.
- 3.4. For implementation of MSKVY 2.0, 8 (eight) SPVs have already been incorporated by MSAPL. In addition to this, MSAPL has already identified about 2731 substations across the state of Maharashtra and is in the process of identifying appropriate revenue land for sub-leasing to the SPVs. As on the date of the present Petition, certain parcels of private land have also been identified by MSAPL, details of which will be shared with the bidders prior to each bid.
- 3.5. The bidding will be carried out in multiple phases. For such procurement, MSEDCL shall be preparing multiple packages comprising of substations identified in different districts of the state of Maharashtra, with separate bid process being run by MSAPL for each such package. Under MSKVY 2.0, 7,000 MW of solar capacity is proposed to be added in a staggered manner, as provided below:

<b>Time Period</b>	<b>Cumulative Capacity</b>
Till April 2025	4000 MW
From July 2025	5000 MW
From October 2025	6000 MW
From December 2025	7000 MW

**3.6. Decentralized supply of energy:**

- 3.6.1 The MNRE in its notification dated 13 December 2019 stipulated Guidelines for Development of Decentralised Solar Power Plants. The said Guidelines highlighted that due to daytime availability, Solar power is best suited for agriculture load. The average transmission and distribution losses for a rural feeder are around 30%. Accordingly, if solar power is generated locally for feeding into the 33/22/11 kV sub-stations, then power quality at the tail end of the rural feeder will improve as well as it will result in cost savings for MSEDCL.
- 3.6.2 Considering the above, MSEDCL proposes to implement the projects under MSKVY 2.0 on a decentralized basis, having multiple smaller units for injecting power directly into the identified substations.

**3.7. Demand management and reduction in price**

- 3.7.1 At present, the average power demand for the agricultural sector across Maharashtra is around 14,000 MW. This demand is supplied such that 50% of the agricultural feeders, on a rotational basis, are provided energy during the daytime with the remainder of the feeders being provided energy in the night time.
- 3.7.2 This power demand is currently supplied through a common power purchase basket which includes power from conventional sources as well. The approved power purchase cost for such power purchase basket for FY 2023-24 and FY 2024-25 is provided below:

(Rs/kWh)

FY	2023-24	2024-25
Power Purchase Cost	4.96	4.97

- 3.7.3 With the proposed procurement of 7000 MW under MSKVY 2.0, MSEDCL proposes to replace the entire night-time supply requirement of power which is currently being met primarily from conventional sources with day time solar supply.
- 3.7.4 It is proposed that solar energy will become the primary source of energy for the agricultural sector, particularly during day time, when consumption is higher than at night. Any gap in requirement of power during day time will be either managed through demand side management by MSEDCL, and/or supplemented through spot procurement, or from conventional / sources of energy.
- 3.7.5 To the extent that the energy requirements will be met with by the supply of solar energy under MSKVY 2.0, the thermal power plants will be backed down as per the Merit Order Despatch (MOD) principles.
- 3.7.6 MSEDCL will only be required to pay the fixed charges to such thermal power plants and can save the costs towards energy charges (which are higher costs) that would have otherwise been

payable by MSEDCL to such thermal power plants for off-taking thermal power. With the additional solar power under MSKVY 2.0 and subsequent reduction in power from thermal power plants, the coal stock position at the thermal power plants would also improve which can be used for consumption during peak time, resulting in lowering MSEDCL's dependence on spot procurement for meeting any shortfall.

- 3.7.7 For supplementing the argument of saving in overall power purchase cost, MSEDCL provided following calculations for (4) scenarios with different tariffs of solar power. Reference tariff of INR 3.10/kWh has adopted from the Commission's order dated 24 May 2023.

<b>FY 2025-26</b>			
<b>Particulars - Considering MSKVY 2.0 Solar power purchase cost</b>	<b>PP Cost without MSKVY 2.0</b>	<b>PP Cost with MSKVY 2.0</b>	<b>Savings/kWh</b>
Scenario 1 (Rs 3.00/kWh)	4.77	4.66	0.11
Scenario 2 (Rs 3.10/kWh)	4.77	4.67	0.10
Scenario 3 (Rs 3.20/kWh)	4.77	4.67	0.10
Scenario 4 (Rs 3.30/kWh)	4.77	4.68	0.09

<b>FY 2026-27</b>			
<b>Particulars - Considering MSKVY 2.0 Solar power purchase cost</b>	<b>PP Cost without MSKVY 2.0</b>	<b>PP Cost with MSKVY 2.0</b>	<b>Savings/kWh</b>
Scenario 1 (Rs 3.00/kWh)	4.83	4.68	0.15
Scenario 2 (Rs 3.10/kWh)	4.83	4.69	0.15
Scenario 3 (Rs 3.20/kWh)	4.83	4.69	0.14
Scenario 4 (Rs 3.30/kWh)	4.83	4.70	0.13

- 3.7.8 It can be observed that, there will be an overall saving in the power purchase cost of MSEDCL for meeting the projected demand of energy, with the solar power generated through MSKVY 2.0 replacing the conventional sources, which would have otherwise been utilised for meeting such demand. The quantum of such savings may, however, differ based on the actual tariff arrived at through the competitive bidding process.

### **3.8. Reducing the dependence on Koyna hydroelectric power plant**

- 3.8.1 The energy drawn from Koyna is currently supplementing the power available from spot procurement on a need basis. However, in light of the water table restrictions, MSEDCL has a limited quota of power, it can offtake from Koyna.

3.8.2 With the proposed procurement, MSEDCL will be able to rationalise and reduce the current dependence on Koyna for base load requirement. The limited capacity of Koyna can be used for peak loads (avoiding costly spot market purchases) and for emergencies or contingencies only. Indirectly, this will improve the energy security for the state of Maharashtra as well.

### 3.9. Mitigating the RPO shortfall of MSEDCL

3.9.1 As on date, out of the contracted capacity of 13,465 MW with renewable power developers, 9,930 MW is commissioned and available out of which about 4,180 MW is from solar power projects.

3.9.2 The Commission in its MYT Order has projected that the solar RPO shortfall of MSEDCL for FY 23-24 and FY 24-25 will be 5155 MUs and 8075 MUs respectively. For FY 25-26 and FY 26-27, MSEDCL provided the tentative RPO shortfall for the upcoming years, taking into consideration the escalation in RPO target as notified by MNRE in its Order dated 22 July 2022.

Particular	FY 22-23*	FY 23-24	FY 24-25	FY 25-26	FY 26-27
RPO target	8%	10.50%	13.50%	15.30%	16.99%
Gross Energy Consumption (GEC)	145690	139854	141596	149366	157383
RPO target in MUs	11655	14685	19115	22853	26739
Estimated Energy based on Commissioned Capacity in MUs	10481	9530	11040	13115	13115
Estimated Energy based on MSKVY 2.0 capacity in MUs	-	-	-	9289	11651
Estimated Energy based on other solar capacity in MUs	-	-	-	1051	1051
<b>Annual shortfall in MUs</b>	<b>1174</b>	<b>5155**</b>	<b>8075**</b>	<b>-602</b>	<b>923</b>
<b>Cumulative shortfall in MUs (including 7351 MUs provisional shortfall till FY 21-22)</b>	<b>8525</b>	<b>8525</b>	<b>8525</b>	<b>7924</b>	<b>8846</b>

*\*Calculation based on actuals*

*\*\*MSEDCL intends to procure solar power for both the years under short term as directed by Hon'ble Commission in the MTR Order*

3.9.3 In order to mitigate the shortfall as set out above, MSEDCL intends to procure solar power for both the years under short term as directed by the Commission in the MTR Order. With the procurement of solar energy of 7,000 MW proposed to be tied up pursuant to MSKVY 2.0, together with 500 MW of interstate solar capacity, will help in lowering the cumulative shortfall and will also cater to the RPO requirement for future years.

3.9.4 In the MTR Order, the Commission has communicated its expectation that MSEDCL should meet the shortfall in RPO obligations in the 2 upcoming years. While MSEDCL is striving to achieve the target set by the Commission, it is submitted that even with the proposed augmentation of solar capacity as envisaged under MSKVY 2.0, there could be a spill-over of some component of RPO to the subsequent years. MSEDCL intends to meet such shortfall through procurement of solar power through short term and long-term power purchase tendering or seek permission to carry forward the same.

### **3.10. System strengthening**

3.10.1 It is pertinent to note that MSKVY 2.0 contemplates contributions to be made by the Government of Maharashtra to MSEDCL for the purpose of system strengthening. These amounts spent on system strengthening will not be passed on to the consumers. Further, the expenditure required for infrastructure development will also be reduced, as the injection will be at pre-existing substations, which will be identified at the stage of bidding.

### **3.11. Generation Metering:**

3.11.1 MSEDCL also seeks to implement feeder level metering for each of the units of the project. This will enable MSEDCL to garner more granular data on a substation level regarding injection and utilization of energy, and also obtain a better assessment of demand at an agricultural feeder level. This in turn will also ensure that the injection of energy from each such project is better accounted for, as the metering will be done at the feeder level.

3.11.2 For the aforementioned purpose, the PPA provides that an SPV has to install Special Energy Meter (SEM) with telecommunication facility with Availability-Based tariff (ABT) feature as per relevant CEA specifications / regulations along with automatic meter reading arrangements.

3.12. In light of the purpose as set out above, MSEDCL has vide letter dated 5 July 2023 authorized MSAPL to conduct the bidding process for identifying the solar power developer to undertake development of the projects.

3.13. The Commission in its Order dated 06 December 2017 for Case No. 157 of 2017, seeking approval of Long/Medium/Short term procurement of Renewable Energy through Competitive Bidding has ruled that MSEDCL shall come before the Commission through a specific a Petition prior to the bidding process only if MSEDCL requires any further deviation with respect to the bidding documents.

3.14. MSEDCL in its Petition proposed following deviations in Bid documents:



**A. AMENDMENTS**

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks
1.	Debt Due	The KUSUM PPA does not provide for any definition of 'debt due'.	<p>Debt Due has been defined to mean the aggregate of the following amounts on the Expiry Date of the PPA:</p> <p>(i) The principal amount of the debt provided by the senior lenders for financing the Project, which has not fallen due for repayment more than 2 (two) years prior to the Expiry Date; and</p> <p>(ii) All accrued interest, fees and charges payable under the in respect of, the aforementioned debt, excluding: (a) any such amount which has fallen due for repayment more than 1 (one) year prior to the Expiry Date, (b) any penal interest or charges, and (c) any pre-payment charges except due to default by MSEDCL.</p> <p>Any amount of CFA availed by the SPV under KUSUM Scheme shall be deducted from the Debt Due.</p>	<p>Definition of 'Debt Due' has been included in the PPA to provide clarity on the quantum of compensation which becomes payable in case an event of default.</p> <p>Further, appropriate carve outs have been built in for deduction of any amounts availed by the SPV under CFA, to prevent overlap between CFA, as well as the termination payments payable by MSEDCL to the lenders. This is being done with the intention to prevent additional burden on MSEDCL, which may result in the event that both, CFA, and the termination payments, are payable by MSEDCL or GOI, as the case may be.</p>
2.	Raising of Invoices and Due Date for payment of Bills/Invoices	The KUSUM PPA provides for the RPG to issue a Bill in hard copy to the DISCOM. However, the KUSUM PPA does not provide for any time limit for RPG to issue the Invoice. Due Date for payment shall be 45 <sup>th</sup> day from the date of acknowledgement of	The PPA provides for the invoice to be raised online. Further, the SPV is required to raise the monthly invoice within 10 days of the following month. Due Date for payment shall be 30 <sup>th</sup> day from the date of submission of soft copy of the bill to MSEDCL	Timelines for raising invoices for the Project has been included to ensure that the cash flow of the SPV is consistent for the smooth and continued operation of the Project. Further, as an incentive for the project developers, the time period for

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks
		hard copy of the bill by the DISCOM		payment of the invoices to be made by MSEDCL to the SPV has been shortened.
3.	Scheduled Commercial Operation Date	<p>Under KUSUM PPA, Scheduled Commercial Operation Date will be 9 (nine) months from the date of the issuance of LOA to the successful bidder.</p> <p>Under the MNRE Guidelines, if the land and connectivity is being provided by the DISCOM, the selected RPG shall commission the solar power plant within nine months from date of issuance of LoA. In other cases, the commissioning shall be done within 12 months of issuance of LoA.</p>	Scheduled Commercial Operation Date will be 12 (twelve) months from the Effective Date, i.e. the date of signing of the PPA.	Under the PPA, the SPV will be responsible for ensuring the connectivity of the Project. Further, while some part of the land is being provided to the SPV, the SPV will be responsible to arrange for any additional land as may be required for the Project from private parties. Further, the SCOD has been linked with the date of the PPA, instead of the LoA, since the Project will be implemented by the SPV, and not the successful bidder directly. There are additional steps to be completed after issuance of the LoA and before signing of the PPA, which include execution of the Share Purchase and Sale Agreement, and approval for adoption of tariff under section 63 etc.
4.	Term of PPA	<p>The KUSUM PPA can be extended for a further period at least one hundred eighty (180) days prior to the Expiry Date, on mutually agreed terms and conditions.</p> <p>Further, the RPG will have the right to operate their plants beyond the Expiry Date subject to requisite permits, approvals etc. being in place, and the</p>	This PPA, subject to Article 13, shall be effective from the Effective Date and remain in operation until the Expiry Date, unless terminated in accordance with Article 3.3 of the PPA.	The lease for the revenue land provided by MSAPL for the project will terminate about the time of the Expiry Date. Extension of lease is not contemplated and the SPV is required to dismantle the project and return the land. Accordingly, extension of the PPA is not contemplated.

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks
		DISCOM will not be obligated to off-take any power beyond the Expiry Date.		
5.	Financial closure	Financial closure is to be achieved within 6 months from the date of the LoA issued to the successful bidder.	Financial closure is to be achieved by way of legally binding agreement within 6 (six) months from the date of the PPA or any mutually agreed extended period. The SPV will submit copies of the Financing Documents entered into in this regard to MSEDCL. In case of failure of SPV to achieve Financial Closure as required above, MSEDCL will have the right to encash the Performance Bank Guarantee, unless the delay is on account of factors not owing to the action or inaction on the part of the SPV or is caused due to Force Majeure in terms of this PPA.	In order to provide flexibility to the SPV for achieving financial closure, the PPA provides for extension of the timeline for achieving financial closure by way of mutual agreement between the SPV and MSEDCL. Further, the PPA provides for obligation of the SPV to submit copies of the Financing Documents to MSEDCL enabling MSEDCL to ensure that: (i) financial closure has been achieved, and (ii) the terms for arranging such finance are not in any way breaching the terms of the PPA. The timeline for achievement of financial closure has been linked with the date of the PPA, instead of the LoA, since the Project will be implemented by the SPV, and not the successful bidder directly.
6.	Obtaining clearances	Obtaining all Consents, Clearances and Permits as required and maintaining all documents shall be responsibility of the RPG.	MSAPL has already facilitated for certain approvals to already be accorded to the SPV. The SPV shall be responsible for procuring all other approvals at its own cost. Procurement of all construction and operations related Approvals for the Project will be the sole responsibility of the SPV.	As part of the MSKVY 2.0 Scheme, to facilitate the implementation of the Project, MSAPL is in the process of facilitating certain approvals for the SPV. However, any approvals not provided in the referred schedule will be procured by SPV directly.
7.	Lock in restrictions	Such restriction has not been provided	There shall be no change in the shares	Given that the Project is being

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks
		for in the KUSUM PPA.	held by the Solar Project Developer in the SPV for a period of at least 1 (one) year from the Commercial Operation Date of the Project.	awarded to the project developer based on their technical and financial capabilities, a lock-in period has been provided in the PPA for the shareholding of the SPV held by the project developer for 1 (one) year.
8.	Capacity Utilisation Factor (CUF) and Shortfall in Minimum Generation	<p>Under the KUSUM PPA, if for any Contract Year except for the first year of operation, the RPG fails to generate the prescribed minimum energy till the end of 10 years from the COD and the prescribed minimum energy for the rest of the Term, on account of reasons solely attributable to the RPG, the RPG shall be liable to pay compensation to the DISCOM for such amount as may be determined by the Appropriate Commission. Such limit shall be prorated for the first year of operation. The minimum amount of compensation payable to DISCOM by the RPG shall be 25% (twenty-five percent) of the cost of generation shortfall, calculated at KUSUM PPA tariff.</p> <p>Under the MNRE Guidelines, the RPG is required to achieve a minimum CUF of 15% on annual basis during the KUSUM PPA period. However, in case of low Solar radiation zones, lower minimum CUF may be specified by the concerned DISCOM.</p>	<p>The SPV shall declare the CUF of the Project on the Effective Date and may revise the same once within the first year of achieving Project Commercial Operation Date, which shall not be less than 19% (nineteen percent) over a year. The SPV shall maintain generation so as to achieve CUF in the range of <math>\pm 10\%</math> of the declared value at all times.</p> <p>The SPV shall be allowed to achieve CUF of 15% (fifteen percent) for certain Units that are part of the Project <i>provided</i> that the CUF of the entire Project remains 19% (nineteen percent) over any Contract Year.</p> <p>If the SPV is unable to (i) generate minimum energy corresponding to the value of annual CUF within the permissible lower limit of CUF as declared by the SPV; or (ii) CUF of any Unit is less than 15%, or such lower limit as may be prescribed by MSEDCL in this regard, then the SPV is liable to pay compensation at the rate of 1.5 times the Tariff. MSEDCL does have the right</p>	<p>CUF related provisions and the compensation payable for shortfall in minimum generation has been aligned with the MSKVY 2.0 Scheme. Further, the prescribed CUF limit is in line with the power purchase agreement finalised by MSEDCL under the KUSUM C Scheme.</p> <p>The minimum Unit CUF has been stipulated at 15% in line with the 'Guidelines for Development of Decentralised Solar Power Plants' of the MNRE dated December 13, 2019, to ensure that some of the Units do not underperform on CUF, which could impact power supply in those areas supplied by such Unit..</p>

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks		
			to relax the lower limits to the extent of grid non-availability for evacuation which is beyond the control of the SPV.			
9.	Excess Generation	The DISCOM shall not be required to purchase any energy over and above the Contracted Capacity in any year.	MSEDCL has right of first refusal for any generation which is in excess of the maximum permissible CUF of the Project in any Contract Year, at the rate of 75% (seventy five percent) of the Tariff. MSEDCL shall have to intimate the SPV of its decision to offtake such excess generation within 15 days of the intimation from the SPV, provided that such intimation is received by MSEDCL at least 30 (thirty) days prior to the end of a Contract Year. If MSEDCL does not reply to the SPV withing the 15 day period, SPV may sell the excess generation to any third party.	To enable MSEDCL to meet any excess power requirements, at a reduced price, MSEDCL has been given right of first refusal for any excess generation. To incentivise the project developer, and to avoid any additional obligation on the part of MSEDCL, the SPV has been provided with the right to sell any excess generation to a third party.		
10.	Deemed generation	<p>the DISCOM is required to pay for 100% of the power not evacuated on account of transmission unavailability. Compensation for generational loss will be as follows:</p> <table border="1" data-bbox="562 1162 1031 1271"> <tr> <td data-bbox="562 1162 751 1271">Grid unavailability</td> <td data-bbox="751 1162 1031 1271">Provision for Generation Compensation</td> </tr> </table>	Grid unavailability	Provision for Generation Compensation	<p>MSEDCL shall be required to pay for any power not evacuated by it, if the availability of the distribution line/transmission line after inter-connection point for evacuation of power falls below 98% i.e. the line unavailability is more than 2% i.e. 14.40 hours (2% x 30 days x 24 hours). Compensation for generational loss will be as follows:</p>	<p>The criterion for calculating transmission unavailability and the duration of the grid unavailability has been detailed in the formula provided to provide better clarity to the SPV about its entitlement to fair compensation in case of grid unavailability and also to limit potential for disputes. Further, the payment of such loss will only be made basis receipt of State Energy Accounts (SEA) or any other relevant documents certified by</p>
Grid unavailability	Provision for Generation Compensation					

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines		Deviation in Clause in MSKVY 2.0 PPA		Remarks
		Grid unavailability in a contract year as defined in the KUSUM PPA: (only period from 8 am to 6 pm to be counted):	$\text{Generation Loss} = \left[ \frac{\text{Average Generation per hour during the Contract Year} \times (\text{number of hours of grid unavailability during the Contract Year})}{\text{Where, Average Generation per hour during the Contract Year (kWh)} = \frac{\text{Total generation in the Contract Year (kWh)}}{\text{Total hours of generation in the Contract Year.}} \right]$	Grid Unavailability	Provision for Generation Compensation	<p>MSEDCL/SLDC, in order to ensure that MSEDCL is required to compensate the SPV only for verified generation loss. Additionally, as an incentive to the SPV, and to sustain cash flow for the SPV, the compensation for generational loss will be paid in the successive bill. Lastly, deemed generation has also been provided for delay in granting connectivity on the part of MSEDCL to prevent any loss to the SPV on account of MSEDCL default.</p>
		The excess generation by the RPG equal to this generation loss shall be procured by the DISCOM at the KUSUM PPA tariff so as to offset this loss in the succeeding 3 (three) Contract Years.		Grid unavailability at each instance	<p>Generation loss (“<b>Generation Loss</b>”) for each instance = Average Generation during the same time block, in the previous eight days, as the block in which the interruption is encountered) × (period of grid unavailability for such instance expressed in hours or any part thereof)</p> <p>Where, Average Generation in any time block in the previous eight days (kWh) = <math>\frac{\text{Total generation in the time block in the previous eight days (kWh)}}{\text{Total hours of uninterrupted generation in the same time block in the previous eight days.}}</math></p> <p>For calculating the total generation</p>	

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks
			<div data-bbox="1060 272 1516 570" style="border: 1px solid black; padding: 5px;"> <p>compensation in a calendar month, the total generation loss shall be a summation of each instance of generation loss that occurs in such calendar month.</p> </div> <p>The Generation Loss will be paid as part of the energy Bill for the successive month after receipt of State Energy Accounts (SEA) or any other relevant documents certified by MSEDCL/SLDC.</p> <p>The PPA further provides that in the event of delay in grant of synchronization/charging permission by the STU and/or a delay in readiness of the MSEDCL/STU substation at the Delivery Point, Units that are impacted by such delay shall be deemed to have achieved the Commercial Operation Date. Such Units shall be eligible to receive deemed generation until such delay is remedied.</p>	
11.	Testing of the Metering Equipment	The KUSUM PPA does not provide for a detailed mechanism for testing of meters.	The PPA provides for a detailed mechanism for testing of the meters, on an annual basis, by MSEDCL, which shall be carried out by a national accredited lab, at the cost of the SPV.	These provisions have been included to: (i) ensure the accuracy of the meters); (ii) avoid any situation of tampering with the meters; and (iii) to comply with law including the Central

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks
				Electricity Authority (Installation and Operation of Meters) Regulations, 2006 (as amended).
12.	Start Up/auxiliary power.	Auxiliary power consumption will be treated as per MERC regulations.	Power imported will be netted-off while accounting for the energy sold to MSEDCL. Subject to the MERC's approval, such net-off would also be counted towards compliance of MSEDCL's Solar RPO.	The PPA provides for netting-off of the power imported by the SPV, so as to simplify the calculation of net amounts payable. In this regard, it may further be noted that the Madhya Pradesh Electricity Regulatory Commission (MPERC) in its order in petition no. 50 of 2020 dated February 16, 2023, in the matter of petition for determination of Feed-in-Tariff for sale of power from decentralized solar power plants having capacity of 500 kW to 2MW to be set up under Component-A of the PM KUSUM Scheme had factored in auxiliary consumption of 0.75% while determining the feed-in tariff of INR 2.93 per unit. This feed-in tariff determined by MPERC was subsequently used as the ceiling tariff in the request for proposal issued by Madhya Pradesh Urja Vikas Nigam Limited for setting up of Grid connected solar PV based power plants of capacity 500 kW to 2 MW under Component A of PM KUSUM Scheme, dated February 28, 2022, bearing reference number RFP No:



Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks
				MPUVN/KUSUM-A/2021-22/10954. Further, the PPA expressly provides that (subject to MERC approval) the power supplied by MSEDCL will be counted towards the RPO of MSEDCL.
13.	Rebate	<p>A Rebate of 2% shall be payable to the DISCOM for the payments made within a period of seven clear working days of the presentation of online copy of Bill along with required supporting documents at the DISCOM office.</p> <p>Any payments made after seven clear working days of the date of presentation of online copy of the Bill along with the required supporting documents at the DISCOM office up to the Due Date shall be allowed a rebate of 1 %.</p> <p>No Rebate shall be payable on the Bills raised on account of Change in Law relating to taxes, duties, cess etc. and on Supplementary Bill.</p>	<p>A rebate of 2% shall be allowed by the SPV to MSEDCL if the payments under an invoice are made through a revolving and valid Letter of Credit. In case payments are disbursed directly by MSEDCL, then a rebate of 1% shall be allowed by the SPV to MSEDCL for the payments made within a period of 7 (seven) days of the online submission of Invoice for the Tariff along with required supporting documents. No rebate shall be applicable for payment beyond 7 (seven) days of the presentation of Invoice for Tariff.</p> <p>No rebate shall be payable on the Bills raised on account of taxes, duties, cess etc.</p>	The quantum of the rebate has been aligned with the provisions of the MERC RE Tariff Regulations, 2019.
14.	Late Payment Charge for delay beyond 30 days	Late Payment Surcharge shall be payable to the RPG at the rate of 1.25% per month on the outstanding amount calculated on a day to day basis.	Late payment surcharge shall be payable by MSEDCL to the SPV at the rate of marginal cost of funds based on lending rate for one year of the State Bank of India, as applicable on the 1 <sup>st</sup> of the respective month where delay occurs, plus 3.5% (three point five percent) per	The quantum of the late payment surcharge has been aligned with the provisions of the MERC RE Tariff Regulations, 2019.

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks
			annum on the amount under such delayed Invoice	
15.	Disputed Bill	As per the KUSUM PPA, in case of dispute relating to any bill, the DISCOM shall pay the undisputed amount to the RPG. In the event of dispute resolution, any excess amounts will be refunded by the RPG along with interest at the same rate as Late Payment Surcharge,	In case of dispute relating to any bill, MSEDCL shall pay 80% of the disputed amount to the SPV under protest. Post resolution, the balance payout or recovery (for either side) shall be entitled to a carrying cost at applicable interest rate for working capital as approved by MERC for MSEDCL for the respective year.	A minimum threshold has been inserted to provide more certainty to the SPV of a minimum assured cash flow pending any dispute resolution. This would also make the Project more bankable. This is also in line with the MSKVY 2.0 Scheme. The allowance of carrying cost ensures that the party that is entitled to the disputed amount receives not just the amount due but also any additional cost of funds it may have incurred pending the dispute resolution
16.	Force Majeure	The benefit of Force Majeure will be applicable for the Project in its entirety.	The benefit of Force Majeure shall be available to the SPV only in respect of such Units which are affected by the occurrence of an event of Force Majeure.	The Project is comprised of multiple Units which are dispersed and not in a single location. Therefore, the impact of force majeure may differ for different Units. Accordingly, the benefit of claiming Force Majeure has been restricted to only the affected Unit.
17.	Change in Law	The benefit of Change in Law will be applicable for the Project in its entirety.	The benefit of Change in Law shall be available to the SPV only in respect of such Units which have achieved Commercial Operation Date and which are affected by the Change in Law. Further, a formula for calculating the change in law has been inserted.	The benefit of any Change in Law is restricted to the Units that have achieved Commercial Operation Date and are affected by such Change in Law event. The formula for assessing the quantum of compensation due to Change in Law will provide assurance and a

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Deviation in Clause in MSKVY 2.0 PPA	Remarks
				degree of certainty to both parties on the potential impact of the Change in Law.
18.	Procedure in case of SPV Event of Default if the lenders are unable to substitute the SPV	Deduction of depreciation has not been provided for in the KUSUM PPA for calculation of cost of acquisition to the Lenders.	For the calculation of Debt Due for determining the cost of acquisition payable by MSEDCL, only the debt corresponding to the depreciated value of the Project shall be considered.	The Debt Due calculation has been limited to the depreciated value of the Project so that in case of an enforcement, MSEDCL's payment obligations are reduced to that extent.
19.	Procedure in case of MSEDCL Event of Default, if the novatee of MSEDCL is not acceptable to the SPV	Under KUSUM PPA, if the novatee of the DISCOM is not acceptable to the RPG, the RPG will have the right to terminate the KUSUM PPA, and either cause the DISCOM to takeover the project by making a payment of the debt due and 150% (one hundred and fifty per cent) of the adjusted equity, or pay damages, for a period of 6 (six) months, or balance period of the KUSUM PPA, whichever is less.	Under the PPA, if the novatee of MSEDCL is not acceptable to the SPV, the SPV will have the right to terminate the PPA, and either cause the MSEDCL to takeover the project by making a payment of the debt due and 110% (one hundred and ten per cent) of the adjusted equity, or pay damages, for a period of 6 (six) months, or balance PPA period whichever is less.	Under the PPA, the amount payable towards adjusted equity has been reduced from 150% to 110% given the large size of the Project in the present case, as compared to the projects developed under KUSUM Scheme. This is also in line with the standard power purchase agreement for long term projects, as published by Solar Energy Corporation of India.
20.	Dispute Resolution through arbitration	If the Dispute is not amicably resolved & such dispute cannot be resolved by the Appropriate Commission, such Dispute shall be resolved by arbitration under the provisions of the Electricity Act, 2003 (as amended from time to time), with the arbitrator being appointed by the Appropriate Commission, and the arbitration will take place as per the provisions of the Arbitration and Conciliation Act 1996. The seat of arbitration will be Mumbai.	Arbitration has not been provided as a mechanism for dispute resolution.	For ease of contract management, all disputes will be referred to the MERC for adjudication.

**B. ADDITIONS**

Sr. No.	Clause	Clause in the MSKVY 2.0 PPA	Remarks
1.	Project to be implemented on a 'BOO' basis	The SPV shall implement the Project on a 'Build Own Operate' (BOO) mode and supply power to MSEDCL, with desired level of performance, until the Expiry Date in accordance with the applicable Law, the Grid Code and the terms and conditions of this PPA and those prescribed in the RfS.	The lease for the revenue land provided by MSAPL for the project will terminate about the time of the Expiry Date. Extension of lease is not contemplated and the SPV is required to dismantle the project and return the land. Accordingly, the PPA provides that the Project will be developed on a 'BOO' basis.
2.	Submission of final drawings by SPV	The SPV shall submit the final design and drawings, layout and drawings/BOM of the Project and associated evacuation infrastructure to MSEDCL.	The clause is to ensure that the SPV complies with technical requirements as required by MSEDCL.
3.	Upgradation of Interconnection Facilities, transmission lines up to Delivery Point, etc.	The SPV shall at its own cost be responsible for construction/ upgradation of: (a) the Interconnection Facilities, (b) the transmission lines, upto the Delivery Point and as per the specifications and requirements of STU/ MSEDCL, as notified to the SPV.	The PPA clarifies that the obligation and cost of upgradation of connection facilities and transmission lines upto the Delivery Point is the sole responsibility of the SPV. It further clarified that such upgradation has to be in compliance with specifications and requirements of MSETCL/ MSEDCL.
4.	Payment of taxes, cess etc.	The SPV shall be responsible for all payments on account of any taxes, cesses, duties, or levies in respect of the Project and the electricity generated therefrom, or consumed by the Project, or on the income or assets owned by it.	The clause clarifies that all taxes and duties on the power generated/consumed will be the responsibility of the SPV.
5.	Connectivity for power consumption during construction phase	SPV shall apply to MSEDCL for connection for the plant from MSEDCL for power to be consumed during construction.	Any power consumed by the SPV during establishment will be only after obtaining connectivity from MSEDCL. .

Sr. No.	Clause	Clause in the MSKVY 2.0 PPA	Remarks
6.	DC Oversizing	SPV may undertake DC oversizing of the Project, at its own risk and cost, provided that no DC Capacity shall be permitted to be added in any Unit after the Commercial Operation Date. For calculating compensation towards Change in Law, the DC installed capacity shall be considered as the lower of the actual installed DC Capacity or the following formula: DC Capacity for Change in Law = AC Contracted Capacity x (declared CUF / minimum CUF stipulated in RFS)	In order to make the Project commercially viable for the project developer, DC oversizing has been permitted. However, such oversizing is at sole risk and cost of the SPV without any recourse to MSEDCL and also subject to the conditions provided in the PPA.
7.	AMR compliance	SPV is required to ensure that meter reading shall be through AMR. In case meter is not fetching data through AMR, joint meter readings shall be referred to.	The clause has been updated to ensure compliance with applicable electricity laws (including Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 (as amended)) and grid code.
8.	Technical specifications	SPV shall ensure that the technical parameters or equipment limits of the Project shall always be subject specified technical standards provided in the PPA.	This clause has been included to ensure that the Project complies with all prescribed technical standards at all points.
9.	Part Commissioning of Solar Capacity	The part commissioning of the Units may be accepted by MSEDCL for a minimum capacity equivalent to the full capacity to be connected at a single bay of the MSEDCL substation. In case of early full or part Commissioning of the Units, MSEDCL will purchase the energy at the Tariff. Early or delayed Commissioning of the Units will lead to extension or reduction in the term of the PPA, as the case may be, for such Unit while the Expiry Date will remain the same throughout the Term.	Part commissioning of the Project is permitted so that in case any Unit is available for commissioning, then MSEDCL has the benefit of purchasing the RE power immediately. Further, this has been included in line with the MSKVY 2.0 Scheme to incentivise efficient and time bound completion of the Project.

Sr. No.	Clause	Clause in the MSKVY 2.0 PPA	Remarks
10.	Incentive for early commissioning	<p>If the Commercial Operation Date for the Units having a capacity equivalent to at least 75% (seventy five percent) of the Contracted Capacity is achieved before the Scheduled Commercial Operation Date, then all such early Commissioned Units would be eligible for following incentive:</p> <p>(a) the Unit(s) injecting energy at 11/22 kV shall be given an incentive of Rs. 0.25/ kWh; and</p> <p>(b) the Unit(s) injecting energy at 33 kV shall be given an incentive of Rs. 0.15/ kWh.</p> <p>for the power sold to MSEDCL for the first 3 (three) years from the Commercial Operation Date, in accordance with the Implementation Agreement.</p>	<p>In line with the MSKVY 2.0 Scheme, additional incentive has been provided for early / timely commissioning of at least 75% of the Contracted Capacity. This seeks to encourage the SPV to achieve timely commissioning so that the SPV gains maximum term of the PPA as well as additional incentives under the MSKVY 2.0 Scheme. Further, the threshold of 75% of Contracted Capacity ensures that a substantial portion of the Project is commissioned and supplying power before any incentives are provided to the SPV for early commissioning. In case of delay beyond the Scheduled Commercial Operation Date, the SPV loses the right to incentives and the PPA term for such units will also be shorter. For delay beyond 2 months from Scheduled Commercial Operation Date, the PPA capacity will be curtailed.</p>
11.	Intimation to MEDA and MSAPL regarding COD	<p>SPV shall send a written intimation to MEDA and MSAPL, with a copy to MSEDCL declaring the Commercial Operation Date for respective Unit(s) as and when they happen.</p>	<p>In addition to MEDA, as the state nodal agency, the SPV is required to also inform MSAPL, in its capacity as the nodal agency for the implementation of the MSKVY 2.0 Scheme.</p>
12.	Availing Central Financial Assistance (CFA)	<p>Subject to meeting the qualification criteria as specified in the KUSUM C Guidelines in terms of the KUSUM Scheme, the Project would be eligible for the Central Financial Assistance (CFA) thereunder.</p> <p>The CFA will be released to the SPV as per the modalities and timelines defined in the KUSUM Scheme. MSEDCL may at its sole discretion extend support to SPV for availing CFA but shall</p>	<p>The clause has been included in line with the MSKVY 2.0 Scheme. The onus of meeting the eligibility criteria as per the KUSUM C Guidelines has been vested on the SPV to ringfence MSEDCL against any claims by the SPV for any non-grant of the benefits including in case the SPV does not meet the qualification criterion.</p>

Sr. No.	Clause	Clause in the MSKVY 2.0 PPA	Remarks
		in no way be responsible for the SPV not meeting the eligibility criteria at the time of release of CFA by MNRE. The SPV shall be responsible for ensuring compliance with the KUSUM Scheme and the requirements of MNRE for availing CFA.	
13.	Repowering	The SPV shall be allowed a maximum cumulative period of 6 (six) months for repowering during the entire PPA term, without any liability for non-supply of power during such period. MSEDCL will be obligated to buy power only within the range of CUF specified in the PPA.	This has been included to ensure that the CUF under the PPA is maintained within limits prescribed and degradation does not result in the CUF dropping beyond the allowed limits. Further, this will ensure that the availability of power for fulfilling objectives of the MSKVY 2.0 Scheme are achieved.

**C. DELETIONS**

Sr. No.	Clause	Clause in the KUSUM PPA/ MNRE Guidelines	Remarks
1.	Insurance	If a Force Majeure Event renders the Power Project no longer economically and technically viable and the insurers under the Insurances make payment on a “total loss” or equivalent basis, DISCOM shall have claim on such proceeds of such Insurance limited to outstanding dues of DISCOM against RPG. Under the KUSUM PPA, the DISCOM will not be charged for any loss, damage, liability, payment, obligation or expense which is insured or for which the RPG can claim compensation under any Insurance shall not be charged to the DISCOM.	Given that the Project will be fully owned and operated by the SPV, this provision has not been included in the PPA.

4. At the E-hearing held on 21 July 2023, an Advocate appearing on behalf of MSEDCL presented modalities of MSKVY 2.0. Considering the scale and objective of the scheme, the Commission directed MSEDCL to submit additional details with regards to a Size of cluster, details of land already in possession and capacity of solar plant which can be set up on such land, timeline for acquiring balance land, Schedule/timeline for undertaking various activities for project implementation from Bid date to Singing of PPA and consultation held while framing deviation in bid documents.

**5. MSEDCL in its Additional submission dated 27 July 2023 submitted following:**

5.1. Size of cluster

5.1.1 The minimum cluster size is proposed to be kept at 250 MW. The final determination of the cluster size is being carried out by way of a thorough assessment of the following factors at the identified locations designated for the cluster:

- a. Available Substation Capacity: The final cluster size is constrained by the capacity of the existing substations within the designated areas. The substations have already been identified and earmarked for the clusters proposed to be floated under the initial tenders.
- b. The existing load at that substation.
- c. Land Availability – the extent of revenue and private land available for a cluster project will also be considered for final size. While it is intended to maximize provision of revenue land; there will be requirement of private land as well.

5.1.2 Based on the comprehensive evaluation of these factors, the final cluster size would be decided and bid out.

5.2. Details of land already in possession and capacity of solar plant which can be set up on such land. Timeline for acquiring balance land.

5.2.1 The entire capacity of 7000 MW is proposed to be implemented in stages. In the initial stage, around 2000 MW of the capacity is proposed to be implemented, for which the entire land requirement has already been identified and includes both government and private land. It is submitted that providing clarity of land availability to the prospective bidders is one of the key features of the MSKVY 2.0 Scheme.

5.2.2 The lease deed format for the revenue land has been finalised in consultation with the Revenue Department and the same has also been duly vetted by Law and Judiciary Department of Government of Maharashtra. Further, the same has also been already circulated to the District



Collectors, who have been given the prime responsibility of leasing the land to MSAPL along with all the relevant clearances and approvals.

5.2.3 Present status of the land for the initial stage is listed below:

Cluster	Districts	Land Identified (Acres)
1	Nashik	2678
2	Solapur	2544
3	Dhule/ Nandurbar/ Nashik	2536
4	Ahmednagar	2533
5	Nagpur, Wardha, Bhandara and Gondia	1695
	Total	11,986

The identified land is sufficient for implementation of capacity of around 2000 MW in the initial stage.

5.3 Schedule/timeline for undertaking various activities for project implementation from Bid date to Signing of PPA

Tentative timelines for various activities are listed below:

Date	Event
T	Submission of Bid
T + 15 Days	Bid Evaluation and Verification
T + 21 Days	Declaration of Successful Bidder and issuance of Letter of Intent (LOI) to Successful Bidder after e reverse auction
Within 7 Days post issuance of LOI	Consent by Bidder to LOI and commencement of tariff adoption process
7 Days post receipt of tariff approval from MERC	Issue of LOA
Within 15 days post issuance of the LOA	Signing of the Share Sale and Purchase Agreement and the PPA

These timelines are indicative and may vary during implementation depending on the circumstances.

5.4 Details of consultations carried out during Scheme preparation:

- 5.4.1 Prior to the formulation of MSKVY 2.0 Scheme, the Government of Maharashtra constituted a MSKVY Study Group. The Study group consisted of representatives in the field of electricity, engineering etc.
- 5.4.2 The Study Group considered inputs from various stakeholders, including developers and other relevant entities involved in the execution of the Scheme. Key inputs included clarity on land availability, handholding of SPDs for clearances, single window approval processes, incentives, strengthening of infrastructure etc.

### **Commission's Analysis and Rulings**

6. MSEDCL has filed this Petition seeking approval for initiating bidding process for procurement of 7000 MW power from distributed solar power projects under GoM's scheme of MSKVY 2.0 and approval for certain deviation from bidding guidelines notified by the Central Government. The Commission notes that the Government of Maharashtra vide its GR dated 8 May 2023 has notified the MSKVY 2.0 with prime objective of providing daytime power supply to agricultural consumers. Said scheme has been designed based on learning from original MSKVY (MSKVY 1.0). Study Group constituted for that purpose had consulted various stakeholders, including developers and other relevant entities involved in the execution of the Solar projects. With inputs from such consultation process, GoM has launched MSKVY 2.0 for encouraging investors to set up distributed solar project in Maharashtra.
7. It is important to note that the Central Government has appreciated features of MSKVY 2.0 and amended its PM-KUSUM implementation guidelines to include such features. MNRE's Office Memorandum dated 12 July 2023 amending guidelines for implementation of PM-KUSUM scheme is reproduced below:

*“Vide OM 32/645/2017-SPV Division dated 22.07.2019, Ministry had issued guidelines for Pradhan Mantri Urja Suraksha evam Utthaan Mahabhiyaan (PM KUSUM). Vide OM of even number dated 04.11.2020, scale-up and expansion of PM KUSUM were issued. The detailed guidelines for implementation of FLS were issued vide OM dated 04.12.2020 and simplification where issued vide OM dated 14.12.2021. Further, the quantities under Component B and C were made fungible. Based on the implementation experience of PM KUSUM, it is observed that Component C is gaining traction among states, and is very important due to its universal access to agricultural feeders. Most of the pumps that are grid connected pumps are now being solarized. For carrying out bids under Component C (FLS), land was observed to be the main issue. On examination of existing arrangements being carried out by various states, it is observed that land aggregation model being implemented by Maharashtra is forward-thinking and meticulously planned. The intention is to take land on lease with commensurate lease rent for farmers, to make sure the availability of land for solar projects. Therefore, in order to facilitate the implementation of the PM KUSUM scheme and ease the process of*

*land availability for solar power plants under Component C (FLS), the scheme is hereby modified with following modalities: ..... ”*

Accordingly, MNRE has incorporated various features of MSKVY 2.0 such as land aggregation, land lease rent, development of online portal, modalities of leasing public and private land, nodal agency for signing lease agreement, clubbing of multiple substations into one project/cluster and inviting common rate so to attract credible solar developer etc.

8. With this background, the Commission is dealing with relief sought by MSEDCL in the present Petition. Based on submissions on record, the Commission frames following issues for its consideration:
  - a. Whether proposed quantum of long term power procurement is justified?
  - b. Whether MSEB Solar Agro Power Limited be authorised to run bidding process on behalf of MSEDCL?
  - c. Whether deviations sought from competitive bidding guidelines by MSEDCL in present Petition are justified?
  - d. Other Issues for effective implementation of MSKVY 2.0

The Commission is addressing above issues in the following paragraphs.

**9. Whether proposed quantum of long term power procurement is justified?**

- 9.1. MSEDCL submitted that by roll out of MSKVY 2.0, the agriculture feeders will be solarized with an objective of supplying daytime electricity to the agricultural consumers. This will also lead to fulfillment of RPO obligations and overall reduction in power procurement cost.
- 9.2. MSEDCL contended that presently daytime availability for agricultural feeders is provided on a rotational basis. 50% of the agricultural feeders are served during the daytime with the remainder of the feeders being provided with energy in the nighttime. The Commission notes that the average power demand for the agricultural sector across Maharashtra is around 14,000 MW. It has been observed that day-time demand of Agricultural load is higher than night time demand. Considering this for accommodating the additional load during daytime planned capacity of 7000 MW appears to be justified.
- 9.3. As far as RPO targets are concerned, MSEDCL relied upon the observations of the Commission in its MTR Order dated 31 March 2023, in which shortfall in Solar RPO targets is evident. As per approved estimates shortfall in MSEDCL’s Solar RPO are as below:

Year	Solar RPO Shortfall (Mus)
FY 2023-24	5155
FY 2024-25	8075

MSEDCL intends to procure solar power for both the years under short term as directed by the Commission in the MTR Order. Proposed procurement of 7,000 MW solar power under MSKVY 2.0, will help in lowering the cumulative shortfall and will also cater to the RPO requirement for future years.

- 9.4. The Commission notes that the project under MSKVY 2.0 will get commissioned by end of December-2025 and then 100% power will be realised. Existing MERC RPO Regulations is applicable up to FY 2024-25 and for subsequent period new trajectory will be notified. Further, Ministry of Power vide its Order dated 22 July 2022 has issued following long term RPO and energy storage trajectory till FY 2029-30:

Year	Quantum of purchase (in %) from Renewable Energy sources (in terms of energy equivalent in kWh)			
	Wind RPO	HPO	Other RPO	Total RPO
	(a)	(b)	(c)	(d)
2024-25	2.46%	1.08%	26.37%	29.91%
2025-26	3.36%	1.48%	28.17%	33.01%
2026-27	4.29%	1.80%	29.86%	35.95%
2027-28	5.23%	2.15%	31.43%	38.81%
2028-29	6.16%	2.51%	32.69%	41.36%
2029-30	6.94%	2.82%	33.57%	43.33%

In above trajectory, Solar RPO is merged in other RPO. The trajectory of 'Other RPO' is on rising trend and it is greater than combined (Wind+Solar) RPO of 25% for FY 2024-25. Thus, to fulfil the future RPO targets, the proposed procurement is warranted.

- 9.5. For sufficing argument of saving in overall power purchase cost, MSEDCL build (4) scenarios. As per scenario analysis for FY 2025-26 net saving of 0.11 to 0.09 per kWh and for FY 2026-27 net saving of 0.15-0.13 per kWh is estimated. With the proposed procurement, MSEDCL will able to rationalise and reduce the current dependence on Koyna Hydro project for base load requirement. The limited capacity of Koyna can be used for peak loads (avoiding costly spot market purchases) and for emergencies or contingencies only.
- 9.6. Considering above, the Commission allows MSEDCL to procure 7000 MW solar power under MSKVY 2.0.

**10. Whether MSEDCL Solar Agro Power Limited be authorised to run bidding process on behalf of MSEDCL?**

- 10.1. The Commission notes that MSKVY 2.0 identifies MSEB Holding Co. Ltd (MSEBHCL) as a Nodal agency. Pursuant to scheme notification, MSEBHCL has incorporated a new entity namely MSEB Solar Agro Power Limited (MSAPL) for project execution and function as a nodal agency. MSEDCL in its Petition proposed that the bidding process under MSKVY 2.0 be conducted by MSAPL on its behalf.
- 10.2. The Commission notes that concept of ‘State Nodal Agency’ has been recognized in MNRE’s Office Memorandum dated 12 July 2023 which has amended guidelines for implementation of PM KUSUM scheme for incorporating land aggregation model of Maharashtra. Thus, MSEB Solar Agro Power Ltd. which has been incorporated as subsidiary of MSEB Holding Co. Ltd. is eligible to perform role of ‘State Nodal Agency’ as envisaged in MNRE guideline dated 12 July 2023.
- 10.3. In view of above, the Commission allows MSEB Solar Agro Power Ltd to conduct bidding process under MSKVY 2.0 on behalf of MSEDCL and perform other activities as envisaged by Nodal Agency under MSKVY 2.0.
- 10.4. It is also important to note that the Commission vide its letter dated 5 January 2022 has advice the Government of Maharashtra to undertake study for formation of Agriculture Electricity Supply company to address the issues related to Electricity Supply to Agriculture Pumps. In its recent tariff Order dated 31 March 2023, the Commission has directed MSEDCL to follow up with the GoM on this aspect. Constitution of MSEB Solar Agro Power Ltd. as a dedicated nodal agency for development of decentralized solar power projects for supplying day time power to Agriculture Consumer can be considered as step towards the formation of separate Agriculture Electricity Supply company.

**11. Whether deviations sought from competitive bidding guidelines by MSEDCL in present Petition are justified?**

- 11.1. The Commission notes that MSEDCL has prepared the bidding documents i.e. RfS and PPA on the basis of Guidelines for Tariff based Competitive Bidding for long-term procurement of grid-connected Solar PV and KUSUM PPA. MSEDCL in its Petition has sought (34) deviations, which include (20) amendment to clauses, (13) new additions and (1) deletion.
- 11.2. The Commission notes that for roll-out of MSKVY 2.0, SPV driven model has been adopted. Hence, suitable modifications in bidding documents are warranted. Details of deviation sought are summarized in para 3.14 above. Proposed deviations are related to operational performance, billing, procedural and contractual aspects. The deviation and its rationale have been analyzed as below:

### 11.3. Operational and Performance related:

11.3.1. MSEDCL has proposed certain deviations pertaining to Operational and Performance related aspects. Notable deviations include following:

- (a) Schedule Commercial Operation Date
- (b) CUF and shortfall in minimum generation
- (c) Deemed Generation
- (d) Start-up / Auxiliary Power
- (e) DC Oversizing
- (f) Repowering
- (g) Incentive for early commissioning.

11.3.2. The Commission notes that as against 9 months period from date of LoA for SCoD under PM KUSUM, MSEDCL has proposed 12 months period for SCoD from date of PPA. The Commission notes that although MSKVY 2.0 envisage aggregation of land by nodal agency and transfer it to successful bidder, scheme also envisage that in case sufficient/suitable land is not made available by Nodal Agency, successful bidder is also allowed to arrange for balance land required for setting up of the project. Therefore, an additional period for SCoD is justified. Notwithstanding such an increase in SCOD Period to 12 months, to avail CFA benefits under PM-KUSUM developer has to achieve SCOD in 9 months only. Also, proposed projects are to be implemented through SPV models. All initial approvals, consents, land lease etc. will be in the name of respective SPV and said SPV will be finally transfer to the successful bidder for execution of project. Hence, mere issuance of LoA will not enable the successful bidder to start execution of project. Hence, the Commission allows date of PPA (which is signed post transfer of SPV) as effective date, for computing period allowed for SCoD. Accordingly, the Commission allows deviations sought in these regards.

11.3.3. As against PM KUSUM requirement of minimum CUF of 15%, MSEDCL has considered 19% as minimum CUF. In the opinion of the Commission such increased minimum CUF is justifiable as project is being developed in a cluster which will have multiple solar plants in nearby geographical area and also has option of additional 20% capacity which can be connected to EHV substation. The Commission also notes that although 19% minimum CUF is at aggregate/cluster level, for ensuring performance of every solar plant in cluster, MSEDCL has proposed condition of minimum 15% CUF for each solar plant under the cluster. This will ensure that every solar plant in the cluster remains operational and objective of distributed generation is fulfilled. It is also important to note that as against penalty of 25% of PPA tariff for shortfall in electricity generation, MSEDCL has proposed to increase such penalty to 1.5 time of the PPA tariff. This will ensure that interest of MSEDCL is protected and to avoid such penalty project developer will ensure that they meet condition of minimum CUF during the contract period. The Commission also notes that recently notified “Guidelines for Tariff based competitive bidding

process of procurement of power from grid connected solar PV power projects” dated 28 July, 2023 has same provision for shortfall in generation. Hence, the Commission allows all deviations sought in these regards.

11.3.4. Formula for deemed generation has been proposed in more transparent manner and it is proposed that Generator will be compensated at PPA tariff for loss of generation due non-availability of Grid beyond 2% of time in a month based on time block wise average generation during last 8 days. Such transparent provision will minimize risk factors for prospective bidders. Accordingly, the Commission allows such deviation.

11.3.5. Deviation has been proposed to allow netting of auxiliary/start-up power consumed by solar power plant with electricity generated by that solar plant. The Commission in the past has allowed such netting arrangement for generators who have PPA with respective Distribution Licensee under Section 62 of the EA, 2003. However, same was not allowed to generator whose tariff has been discovered through competitive bidding under Section 63 of the EA 2003 because bidding document for those plants had clear provision that start-up power will be billed at tariff approved by the Commission and based on that condition, those generators have quoted their tariff. But in present case, bidding process is yet to be started and if such condition of netting of auxiliary power consumption with energy generated is made part of bid, then prospective bidders can factor it appropriately while submitting their bid. As netting arrangement provides ease of implementation, the Commission allows this deviation proposed in this Petition.

11.3.6. DC oversizing is proposed to be allowed to enable project developers to design its project to increase CUF. However, by stipulating transparent formula, liability towards increased expenses on account of Change in Law, if any, is proposed to be restricted to certain percentage of DC oversizing. Such restricted liability of Change in law is based on this Commission’s Order in the past. Further, re-powering of solar plant is proposed to be allowed, which will enable project developer to replace existing solar panel with more efficient solar panel in future, at their own risk and cost. As such conditions are proposed to be put in the bid document, all prospective bidders would factor in while submitting their bid. The Commission allows these deviations.

11.3.7. MSEDCL has also proposed to offer incentives for early commissioning of solar projects. As such deviation will encourage successful bidder to complete the project prior to SCoD, the Commission allows such deviation.

#### 11.4. Billing Related:

11.4.1. Apart from the above operational performance-based deviations, MSEDCL has proposed certain deviations pertaining to billing aspects. Notable deviations include following:

- (a) Explicit stipulation of timeline for raising invoice and due date for payment of bills;



- (b) Rebate;
- (c) Disputed bills;
- (d) Late Payment Surcharge for delay beyond 30 days;

11.4.2. The timeline for making payment to SPV has been shorten. In case of disputed bills, MSEDCL has categorically assured release of 80% bill under protest, which will provide more certainty to successful bidder. Hence, the Commission finds it appropriate to accept these billing related deviations.

11.4.3. The Commission notes that MSEDCL has proposed to aligned the provisions of Late Payment Surcharge with stipulations in MERC RE Tariff Regulations, 2019. In this regard, the Commission notes that on the issue of Late Payment Surcharge, the Ministry of Power has notified Rules in 2021 and amended it subsequently from time to time which needs to be complied with by all stakeholders. In fact, the Commission has amended its Multi Year Tariff Regulations to make it consistent with such MoP Rules. RE Tariff Regulations will be amended in due course of time. Meanwhile all new bidding processes need to be consistent with MoP Rules. Accordingly, the Commission directs MSEDCL to modify its bidding document to make it consistent with MoP Rules.

#### 11.5. Procedural and Contractual Related:

11.5.1. MSEDCL has proposed certain deviations pertaining to procedural and contractual aspects. Notable deviations include following:

- (a) Debt Due;
- (b) Term of the PPA;
- (c) Financial Closure;
- (d) Obtaining clearances;
- (e) Lock in restrictions;
- (f) Force Majure;
- (g) Change in Law;
- (h) Procedure in case of SPV event of default if the lenders are unable to substitute the SPV;
- (i) Procedure in case of MSEDCL default, if novate of MSEDCL is not acceptable to the SPV;
- (j) Dispute resolution through arbitration;
- (k) Deletion of clause related to insurance.

11.5.2. As against enabling provision in guidelines/ PM KUSUM document for extension of PPA post expiry of tenure on mutual agreed basis, MSEDCL has proposed to delete provision related to extension of PPA. While justifying such deviation, MSEDCL stated that as land lease agreements are limited for PPA tenure, no extension in PPA is envisaged beyond that period. In this regard, the Commission notes that although land lease agreement for private land may be



limited for PPA tenure of 25 years, but as mentioned in MNRE's Office Memorandum dated 12 July 2023, land lease agreement for public land is for 30 years. Hence, after expiry of 25 years tenure, PPA can be extended at least for projects on public land with mutual consent. Hence, the Commission directs MSEDCL to modify its bid document to include enabling provision for extension of PPA beyond 25 years tenure on mutual agreement basis for solar plants on public land.

11.5.3. MSEDCL has linked the timeline for achievement of financial closure with the date of PPA instead of LoA. The above consideration seems appropriate as there are additional steps to be completed after issuance of the LoA and before signing of the PPA, which include execution of the Share Purchase and Sale Agreement.

11.5.4. The Project is comprised of multiple Units which are dispersed and not in a single location. The impact of force majeure and Change in Law may differ for different Units. Accordingly, the benefit of claiming Force Majeure and Change in Law are proposed to be restricted to only the affected Unit. The rationale is correct and hence accepted.

11.5.5. Remaining deviations are needed for better clarity to prospective bidders and hence approved.

11.6. The Commission notes that clause 3.6.2 (a) of the RfP reads as follows:

*“(a) The **minimum** lease rent for such private lands will be INR 1,25,000/- per hectare per annum or 6% (six percent) of ready reckoner rate, whichever is higher, with a provision of 3% (three percent) escalation on an annual basis.”*

Although intent of the above clause is to allow 3 % escalation on lease rent amount on annual basis, use of word ‘minimum’ may create confusion. Hence to clearly convey the intent of this clause, above word ‘minimum’ shall be replaced with ‘base’.

11.7. The Commission also notes that clause 3.6.2(d) of the RfP provides rights to the landowner to unilaterally cancel the lease agreement if such lease agreement does not become effective within 6 months from signing of lease agreement. Until the agreement becomes effective which is linked to signing of PPA, landowner will not get any rent for such land. 6 months is too long for land owner to wait without any rent. Hence, MSEDCL may reduce such period to 2 months which will also put pressure on selected bidder for early signing of PPA otherwise there is risk of cancellation of land lease agreement.

11.8. All other deviations proposed by MSEDCL, although not discussed in above paragraphs are required for providing more clarity to prospective bidders and hence the Commission has allowed the same.

## 12. Other Issues for effective implementation of MSKVY 2.0:

12.1. In the past, the Commission has come across various cases in which MSEDCL has delayed bidding process/ signing of PPA. Hence, during hearing in present case, the Commission has directed MSEDCL to submit timelines for undertaking various activities under MSKVY 2.0 so that instances of delays would not occur again. In response, MSEDCL has submitted following timelines:

Date	Event
T	Submission of Bid
T + 15 Days	Bid Evaluation and Verification
T + 21 Days	Declaration of Successful Bidder and issuance of Letter of Intent (LOI) to Successful Bidder after e reverse auction
Within 7 Days post issuance of LOI	Consent by Bidder to LOI and commencement of tariff adoption process
7 Days post receipt of tariff approval from MERC	Issue of LOA
Within 15 days post issuance of the LOA	Signing of the Share Sale and Purchase Agreement and the PPA

The Commission directs MSEDCL/ MSEB Solar Agro Power Ltd to strictly comply with above stated timelines.

12.2. The Commission also notes that as per conditions stipulated under the bid document, successful bidder is eligible to claim Central Financial Assistance (CFA) under PM-KUSUM and MSEDCL will facilitate successful bidder to avail such benefit. As MSKVY 2.0 is to be implemented in clusters consistent of multiple solar plants, possibility of some of the plants not fulfilling criteria of PM KUSUM cannot be ruled out especially when solar plant connecting to EHV level are also envisaged under MSKVY 2.0. Under such circumstances, for bidders to appropriately factor CFA while quoting tariff, more clarity is required. At the same time, it is also important that benefits of such CFA are passed on to the end consumers by way of reduction in tariff to be quoted by bidders. To have the clarity on CFA to bidders and to avoid the further litigations, MSEDCL may make following changes in its bid document:

- a. Bid Document shall clearly mention list of substation/plant and associated Solar Capacity eligible for CFA under PM KUSUM.
- b. Bidder shall quote single tariff for complete project/cluster and separately indicate percentage discount it would offer on quoted tariff for energy to be generated from substation/plants identified for CFA.

- c. Bid evaluation shall be based on weighted average tariff for project/cluster arrived by applying quoted tariff for non-CFA capacity and discounted tariff for CFA linked capacity. CUF of 19% shall be used for both capacities. Similar computation of weighted average tariff shall be undertaken in reverse auction process to decide L1 bidder.
- d. The bidder is free to offer any percentage of discount for solar capacity linked to CFA which will be considered as final and will be applicable during tenure of PPA irrespective of bidder actually able to avail such CFA or not. Therefore, Bidder is expected to take due precautions before quoting such discount. Further, Bidder will be solely responsible for availing CFA from the Central Government.

In the opinion of the Commission, above mechanism will ensure that prospective bidders will appropriately factor CFA amount while quoting their bids.

12.3. The Commission also notes that MSEDCL is preparing cluster by combining individual solar projects in particular geographical area. Individual Solar project is proposed only if substation has capability to absorb given quantum of solar power and land for the same is also available in nearby area. Therefore, while formation of initial cluster for bidding purpose, some of the substations in that geographical area may not be included due to non-fulfilment of any of the above-mentioned condition say non-availability of land but after some time if lands becomes available then as bidding process has already started such substation remains uncovered. To address such situation, it is suggested that MSEDCL may consider seeking bids with Green Shoe Option in following manner:

- a. Under Green Shoes Option, Discom in its Bid document needs to mention that it may purchase additional quantum over and above the bid capacity at discovered tariff. Bidder while submitting its bid needs to clearly mention that whether it is ready to offer additional capacity at quoted tariff under Green Shoe option or not. If successful bidder has opted for Green Shoe option and tariff discovered is favorable, then Discom while issuing LoA to successful bidder shall mention additional quantum to be supplied under Green Shoe option. It is important to note that timelines for commissioning of project and other related clauses of PPA applicable for base capacity are equally applicable for additional capacity under Green Shoes.
- b. Based on above concept of Green Shoe Option, MSEDCL in its bid document may mention that it can purchase additional quantum of certain percentage (say 25%, 50% etc.) of bid capacity under Green Shoe Option if discovered rate is favorable to it.
- c. Post Bidding process, if selected bidder has opted for such Green Shoe Option then LoA shall be placed for the original bid capacity plus Green Shoe capacity.

12.4. The Commission has suggested above modification for effective implementation of MSKVY 2.0 and to avoid any unnecessary future disputes between parties.

13. In view of the above, the Commission accords approval to Request for Selection (RfS) document & draft Power Purchase Agreement (PPA) with proposed deviations filed by MSEDCL under the present Case, subject to observations in Para (11 and 12) above. MSEDCL and MSAPL may proceed ahead with the bidding process. However, specific Petition shall have to be separately filed by MSEDCL after bidding process is completed for adoption of tariff as mandated under Section 63 of the EA, 2003.

14. Hence, the following Order.

### **ORDER**

- 1. Case No. 164 of 2023 is allowed.**
- 2. The Commission accords its approval for initiating process for procurement of 7000 MW on long term basis from solar generator under MSKVY 2.0.**
- 3. Request for Selection (RfS) document & draft Power Purchase Agreement (PPA) are approved subject to observations in Para (11 and 12) above.**

Sd/-  
**(Surendra J. Biyani)**  
Member

Sd/-  
**(Anand M. Limaye)**  
Member

Sd/-  
**(Sanjay Kumar)**  
Chairperson

  
**(Dr. Rajendra Ambekar)**  
I/c Secretary

